

Deepak Nitrite Ltd



Technical Data Sheet

Sodium Nitrate (Domestic)

1. Introduction

Sodium nitrate are fine crystalline white slight hygroscopic odourless powder that is soluble in water upon heating. It is stable in neutral or alkaline solutions

1. Product: Sodium Nitrate
2. CAS No: 7631-99-4
3. Molecular Formula: NaNO₃
4. Molecular Weight: 84.99 gm / mole
5. Structural Formula

2. Physical Properties:

Physical state: solid

Appearance: White crystalline powder :

Melting Point : 308 °C

Stability: Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Do not store near combustible materials.

Specific Gravity: 2.257g/cm³

Solubility water : 780 gpl (At 15 C)

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Subject :- Solubilities of NaNO₃ in Water

Substance	Formula	Phase	Temp °C	%solubility
Sodium Nitrate	NaNO ₃	Solid phase	0	73
			10	80
			20	88
			30	95
			40	104
			50	114
			60	124
			70	NA
			80	148
			90	NA
			100	180

Substance	Formula	Temp °C	wt.%NaNO ₃ satd. Solution	Density of satd. solution
Sodium Nitrate	NaNO ₃	-18.1	38.07	NA
		-9.9	39.8	NA
		0	42.23	1.3532
		10	44.54	1.3683
		20	46.8	1.3834
		30	49.02	1.3986
		40	51.2	1.4139
		60	55.48	1.4447
		80	59.67	1.4759
		100	63.77	1.5074
		110	65.8	1.5231
		119	67.62	1.5374
136	71.5	NA		

Reference : Chemical hand of Engendering By Perry .

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3. Product Quality Specification:

Sr Number	Parameter	Standard Grade Un coated	Technical Grade Uncoated grade	Std grade coated grade
01	Physical Appearance	White or slightly off white to light cream colour powder.	White or slightly off white to light cream colour powder.	White or slightly off white to light cream colour powder.
02	Purity on Dry basis	99.00 %w/w Min.	99.00 %w/w Min.	98.00 %w/w Min.
03	Loss on Drying	0.50%w/w Max.	0.50%w/w Max.	0.50%w/w Max.
04	Alkalinity as Na ₂ CO ₃	0.05%w/w Max.	0.05%w/w Max.	0.05%w/w Max.
05	Chloride as Cl	0.10%w/w Max.	0.10%w/w Max.	0.10%w/w Max.
06	Sodium Nitrite	0.20%w/w Max.	0.03%w/w Max.	0.03%w/w Max.
07	Sulphate as SO ₄	0.05%w/w Max.	-	-
08	Iron As Fe	0.005%w/w Max.	0.005%w/w Max.	0.005%w/w Max.
09	Anticaking agent	-	-	0.5 to 1.0%w/w

Our products are not meant for use as food or drug additives.
Anticaking Agent use in coating is Precipitated Silica.

4. Packing Information:

Sr. Number	Grade	Packing	Secondary Packing
01	Standard-Technical Grade - Uncoated	50 Kg HDPE woven bags with LDPE liner	-- ---
02	Standard Grade -coated	50 Kg HDPE woven bags with LDPE liner	-- ---

DNL Can customize packing for different quantities.

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5.PRODUCT USES

Sr No	Industries	Usage
01	Technical applications	Sodium Nitrate is intended primarily for applications where problems arise due to foaming caused by the anti-caking agent or to burning on melting.
02	Construction	As a concrete additive for achieving special properties
03	Chemical and Pharmaceutical	As an oxidizing agent. For the manufacture of dyes, pharmaceuticals, nitrates etc. & firecracker
04	Chemical Industries	For the manufacture of corrosion inhibitors. As a component of heat transfer salts (e. g. tempering and quenching salts) in many industrial sectors.
05	Glass and enamel industry	For refining the glass/enamel melt in the manufacture of high-quality glasses and enamel products.
06	Metal industry	In electrolytic deburring. As a constituent of melts for descaling steel. In the pickling of aluminium. For the production of baths for burnishing steel. As an accelerator in phosphating. For cleaning and decolourising in enamelling. For refining lead (HARRIS process). As a flux.
07	Industrial explosives and Pyrotechnics industries	For the manufacture of explosives, black powders, flares, etc. Sodium nitrate is also used as a lighting fuel for charcoal

6. Regulatory Information :-

Particulars	Information	Pictogram
Hazard Class	5.1	
Label	Oxidizer	
Subsidiary Label	Toxic	
UN Number	1498	
Proper shipping Name	Sodium Nitrate	
Packing Group	III	

Reach Details :-

Sodium Nitrate - 05-2115859547-30-0000

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7. PRODUCT SAFETY INFORMATION :

Sodium nitrate may irritate the skin or eyes. Contact with combustible material may cause fire. Although it is used in small amounts as a food preservative, direct ingestion can irritate the mouth, esophagus or stomach, cause other toxic effects and can even be fatal. Inhaling sodium nitrate dusts are swallowed or inhaled, there is a risk of methaemoglobin formation and cyanosis. It is therefore essential to avoid inhaling and swallowing

As with any chemical, sodium nitrate requires care in handling. Anyone responsible for the procurement, use or disposal of this product should familiarize himself and those handling the product with the appropriate safety and handling precautions. This information is available in the Material Safety Data Sheet, which may be obtained by contacting our Customer Service Group.

8. Manufacture Site :

Deepak Nitrite Ltd.
4-12 GIDC Chemical Complex
Nandesari
Dist. Vadodara – 391 340
Gujarat
India

9. Corporate Headquarter: :

Deepak Nitrite Ltd.
Aaditya-I, National Highway No. 8, Chhani Road,
Vadodara - 390 024,
India

10. For Chemical Emergency :

Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887

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Disclaimer :

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